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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,976	10/03/2003	Charbel Khawand	CE11191JI210	1560

22917 7590 11/07/2005

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EXAMINER
LIN, KENNY S

ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/678,976	KHAWAND ET AL.
	Examiner	**Art Unit**
	Kenny Lin	2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 03 October 2003.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-21 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9, 11, 13-14 and 17-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

   a. The following terms lack proper antecedence basis:

      i. Claim 9, lines 2 and 3 – it;

      ii. Claim 11, line 2 – the service requestor;

      iii. Claim 13, line 1 – the service requestor;

      iv. Claim 14, line 2 – it;

      v. Claim 17, lines 4 and 7 – it;

   b. The following terms render the claim indefinite:

      i. The term "every so often" in claim 14 is a relative term which renders the claim indefinite. The term "every so often" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 10-12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bortoloso et al (Bortoloso), US 2003/0120782, in view of Partanen, US 2004/0205767.

6. As per claim 1, Bortoloso taught the invention substantially as claimed including an Interprocessor communication network, comprising:

a. An IPC server (pp. 0031, 0076);
b. One or more IPC clients coupled to the IPC server (pp. 0031, 0080-0081).

7. Bortoloso further taught the IPC server and IPC client to both use tables to store client and server information such as connection state and physical state (pp. 0031-0032) and to performance detecting and tuning (pp. 0082). Bortoloso did not specifically teach the IPC server to include an operational state table which keeps track of the operational state of the one or more IPC clients, the IPC server upon receiving a service request determines which from amongst the one or more IPC clients is best suited to handle the service request. Partanen taught to use operational state tables to keep track of the operational state of the one or more clients and to determine which from amongst the one or more clients is best suited to handle the service request

(pp. 0015-0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso and Partanen because Partanen's teaching of using operational state and determining a best client for processing request enables Bortoloso's network to further improve load balancing requirements by evenly distributing the requests loads.

8. As per claim 10, Bortoloso taught the invention substantially as claimed including a method for providing intelligent targeting of nodes in an interprocessor communications network having one or more nodes and an IPC server coupled to the one or more nodes (pp. 0031, 0076, 0080-0081), comprising the steps of:

a. Receiving a service request at the IPC server (pp. 0035-0036);
b. Determining which of the one or more nodes can handle the service request (pp. 0071-0072, 0082).

9. Bortoloso further taught the IPC server and IPC client to both use tables to store client and server information such as connection state and physical state (pp. 0031-0032) and to performance detecting and tuning (pp. 0082). Bortoloso did not specifically teach to select from the one or more nodes that have been determined to be able to handle the service request in step b) the best one to handle the service request using an operational state table located within the IPC server. Partanen taught to use operational state tables to keep track of the operational state of the one or more clients and to select from amongst the one or more clients the best one suited to handle the service request (pp. 0015-0017). It would have been obvious to one of ordinary

skill in the art at the time the invention was made to combine the teachings of Bortoloso and Partanen because Partanen's teaching of using operational state and determining a best client for processing request enables Bortoloso's network to further improve load balancing requirements by evenly distributing the requests loads.

10. As per claim 11, Bortoloso and Partanen taught the invention substantially as claimed in claim 10. Bortoloso further taught to send a message to the service requestor informing it which node will handle the service request (pp. 0047-0059).

11. As per claim 12, Bortoloso and Partanen taught the invention substantially as claimed in claim 11. Bortoloso further taught to synchronize the tables (pp. 0031-0033). Partanen taught that the IPC server determines based on the operational state information which of the one or more nodes is best suited to perform the service being requested by the service request (pp. 0015-0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso and Partanen because Partanen's teaching of using operational state and determining a best client for processing request enables Bortoloso's network to further improve load balancing requirements by evenly distributing the requests loads.

12. As per claim 15, Bortoloso and Partanen taught the invention substantially as claimed in claim 11. Bortoloso further taught the one or more nodes periodically send message to the IPC

server which update the information in the operational state table (synchronizing the table; pp. 0031-0033).

13. As per claim 16, Bortoloso and Partanen taught the invention substantially as claimed in claim 11. Partanen further taught that at least one of the one or more nodes sends a message to the IPC server which updates the information in the operational state table when it reaches a predetermined operational activity threshold level (pp. 0046).

14. Claims 2-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bortoloso and Partanen as applied to claim 1 above, and further in view of Liang et al (Liang), US 2005/0044162.

15. As per claim 2, Bortoloso and Partanen taught the invention substantially as claimed in claim 1. Bortoloso and Partanen did not specifically teach that the service request includes an opcode which informs the IPC server what service is being requested. Liang taught to use opcode in service requests to inform server what service is being requested (pp. 0052-0056). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso, Partanen and Liang because Liang's teaching of using opcode enables Bortoloso and Partanen's network to incorporate various operation comments in the service request.

16. As per claim 3, Bortoloso, Partanen and Liang taught the invention substantially as claimed in claim 2. Liang further taught to use opcode in service requests to inform server what service is being requested (pp. 0052-0056). Partanen further taught the IPC server upon receiving the service request to determine which form amongst the one or more IPC client is capable of supporting the requested service (pp. 0015-0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso, Partanen and Liang because Liang's teaching of using opcode enables Bortoloso and Partanen's network to incorporate various operation comments in the service request.

17. As per claim 4, Bortoloso, Partanen and Liang taught the invention substantially as claimed in claim 3. Bortoloso and Partanen further taught the one or more clients send message to the IPC server that are used by the IPC server to update the operational state table (see Bortoloso, pp. 0002, 0031-0034; see Partanen, pp. 0046).

18. As per claim 6, Bortoloso, Partanen and Liang taught the invention substantially as claimed in claim 4. Bortoloso, Partanen and Liang did not specifically teach that the IPC network is located within a radio communication device. However, Official Notice is taken that IPC network is well known and expected in the art to be implemented in various communication device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso, Partanen, Liang's IPC network and further implement the IPC network into a radio communication device.

19. As per claim 7, Bortoloso, Partanen and Liang taught the invention substantially as claimed in claim 4. Bortoloso further taught that the message sent by the one or more clients to the IPC server are sent periodically (synchronizing the table; pp. 0031-0033).

20. As per claim 8, Bortoloso, Partanen and Liang taught the invention substantially as claimed in claim 4. Partanen further taught that the message sent by the one or more clients to the IPC server are sent after each of the one or more clients reaches a certain operational usage threshold level (pp. 0046).

21. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bortoloso, Partanen, Liang as applied to claim 1 above, and further in view of Huetsch et al (Huetsch), US 2002/0049842.

22. As per claim 5, Bortoloso, Partanen and Liang taught the invention substantially as claimed in claim 4. Bortoloso, Partanen and Liang did not specifically teach that the service requestor can request a specific node to handle the service request and the IPC server will monitor the operational state table in order to determine when the specific node is available to handle the service request. Huetsch taught a load balancing method which enables the service requestor can request a specific node to handle the service request and the IPC server will monitor the operational state table in order to determine when the specific node is available to handle the service request (pp. 0039, 0042-0043). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso,

Partanen, Liang and Huetsch because Huetsch's teaching of requestor specified request enables Bortoloso, Partanen and Liang's method to allow the requestors to select a node for processing their requests.

23. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bortoloso, Partanen and Liang as applied to claims 1-4 above, and further in view of Lee et al (Lee), US 5,224,100.

24. As per claim 9, Bortoloso, Partanen and Liang taught the invention substantially as claimed in claim 4. Bortoloso, Partanen and Liang did not specifically teach that at least one of the one or more IPC clients has sub-clients coupled to it and the IPC server sends the operational state table to it. Lee taught an IPC network to have sub-clients connected to clients (col.3, lines 30-47; figs. 1 and 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso, Partanen, Liang and Lee because Lee's teaching of multi-level hierarchical network of clients guarantees Bortoloso, Partanen and Liang's IPC network high speed and low cost (see Lee, abstract).

25. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bortoloso and Partanen as applied to claim 10 above, and further in view of Huetsch et al (Huetsch), US 2002/0049842.

26. As per claim 13, Bortoloso and Partanen taught the invention substantially as claimed in claim 11. Bortoloso and Partanen did not specifically teach that the service requestor sending the service request of step a) can specify which of the one or more nodes it wants to have perform the service, and the IPC server can determine if the specified node is currently available to handle the service request. Huetsch taught a load balancing method which enables the service requestor to specify which of the one or more nodes it wants to have performs the service, and the IPC server can determine if the specified node is currently available for handle the service request (pp. 0039, 0042-0043). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso, Partanen and Huetsch because Huetsch's teaching of requestor specified request enables Bortoloso and Partanen's method to allow the requestors to select a node for processing their requests.

27. As per claim 14, Bortoloso, Partanen and Huetsch taught the invention substantially as claimed in claim 13. Partanen further taught to monitor and determine if the node is able to perform the requested service (pp. 0046-0047). Huetsch further taught the server to inform the service requestor that the requested node is available to perform the requested service (pp. 0040, 0042-0045).

28. Claims 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bortoloso et al (Bortoloso), US 2003/0120782, in view of Partanen, US 2004/0205767, and Lee et al (Lee), US 5,224,100.

29. As per claim 17, Bortoloso taught the invention substantially as claimed including an IPC network, comprising:

a. An IPC server (pp. 0031, 0076);

b. One or more clients coupled to the IPC server (pp. 0031, 0080-0081).

30. Bortoloso further taught the IPC server and IPC client to both use tables to store client and server information such as connection state and physical state and provides the tables to the clients (pp. 0031-0032). Bortoloso did not specifically teach that one of the one or more clients has at least one client coupled to it as a sub-client; and the PIC server includes an operational state table which keeps track of the operational state of the one or more clients. Partanen taught to use operational state tables to keep track of the operational state of the one or more clients and to select from amongst the one or more clients the best one suited to handle the service request (pp. 0015-0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso and Partanen because Partanen's teaching of using operational state and determining a best client for processing request enables Bortoloso's network to further improve load balancing requirements by evenly distributing the requests loads. Bortoloso and Partanen did not specifically teach that one of the one or more clients has at least one client coupled to it as a sub-client. Lee taught an IPC network to have sub-clients connected to clients (col.3, lines 30-47; figs. 1 and 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bortoloso, Partanen and Lee because Lee's teaching of multi-level hierarchical network of

clients guarantees Bortoloso and Partanen's IPC network high speed and low cost (see Lee, abstract).

31. As per claim 18, Bortoloso, Partanen and Lee taught the invention substantially as claimed in claim 17. Partanen further taught to determines based on the operational state information which of the one or more client is best suited to perform the service being requested by the service request (pp. 0015-0017).

32. As per claim 19, Bortoloso, Partanen and Lee taught the invention substantially as claimed in claim 17. Bortoloso and Partanen further taught the one or more clients send message to the IPC servers which are used to update the operational state table (see Bortoloso, pp. 0002, 0031-0034; see Partanen, pp. 0046).

33. As per claim 20, Bortoloso, Partanen and Lee taught the invention substantially as claimed in claim 19. Bortoloso further taught the message which are used to update the operational state table are sent periodically to the IPC server (synchronizing the table; pp. 0031-0033).

34. As per claim 21, Bortoloso, Partanen and Lee taught the invention substantially as claimed in claim 19. Partanen further taught that the message which are used to update the operational state table are sent by the one or more clients after each has reached a predetermined activity threshold level (pp. 0046).

Conclusion

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Richter et al, US 2002/0107962.

Lam et al, US 5,926,636.

Heddaya et al, US 6,622,157.

Majoor, US 2002/0049691.

Keshav et al, US 5,623,605.

"Interprocess Communication", Stanford University, October 4, 1994, pages 1-2.

Leffler et al, "An Advanced 4.4BSD Interprocess Communication Tutorial", The Regents of the University of California, 1993, pages 1-37.

36. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenny Lin whose telephone number is (571) 272-3968. The examiner can normally be reached on 8 AM to 5 PM Tue.-Fri. and every other Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ksl
November 1, 2005

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